



The Advance Xitanium range of linear LED drivers is designed to provide OEMs with ultimate flexibility. These models are compatible with standard 0-10V dimming systems to deliver reliably smooth dimming performance down to a minimum of 1%. Enabled with SimpleSet technology, these drivers offer the needed flexibility and performance for the application with precise tuning of drive currents, selectable dimming curves and adjustable minimum dimming levels. With wide operating windows, slim profile and simple current adjustability, the drivers make it easy for luminaire manufacturers to design linear fixtures with desired lumen levels to suit the application.

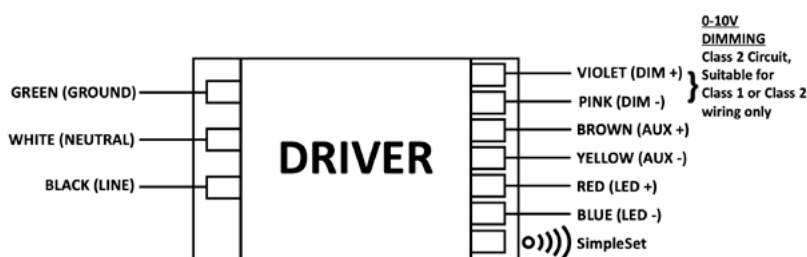
Specifications

| Input Voltage (Vac) | Output Power (W) | Output Voltage (V) | Output Current (A) | Efficiency @ Max Load and 75°C Case | Max Case Temp. (°C) | Input Current (A) | Max. Input Power (W) | THD @ Max Load (%) | Power Factor @ Max Load | Surge Protect. (Ring Wave, KV) | Envir. Protect. Rating | Dim. | Dimming Range (with specified dimmers) | Minimum Output Current (A) | Driver Type | Other Comments |
|---------------------|------------------|----------------------|--------------------|-------------------------------------|---------------------|-------------------|----------------------|--------------------|-------------------------|--------------------------------|------------------------|--|--|----------------------------|------------------|--------------------------------|
| 120 | 40 | 10-54 Class 2 Output | 0.1 - 1.1 | 87% | Life-75°C | 0.40 | 47 | <10% | >0.95 | 2.5 | UL damp & dry | 0-10V Analog Class 1 or Class 2 Wiring | 1% - 100% | 0.0037 | Constant Current | Dimming source current: 150 µA |
| 277 | | | | 89% | UL-85°C | 0.18 | | <15% | | | | | | | | |

Enclosure

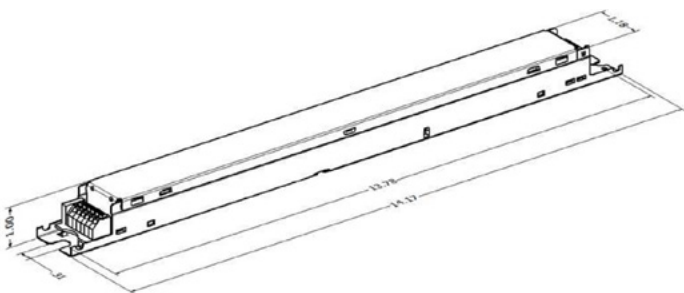
| | In. (mm) |
|------------------------|-------------|
| Case Length | 14.17 (360) |
| Case Width | 1.18 (30) |
| Case Height | 1.00 (25.4) |
| Mounting Length | 13.78 (350) |
| Mounting Hole Diameter | 0.31 (7.9) |
| Overall Length | 14.17 (360) |

Wiring Diagram



WARNING:
 Install in accordance with National and Local Electrical Codes.
 Use 18 AWG Solid Copper Wire.
 Rated $\geq 300V$, Strip Wire 3/8".
 The field-wiring leads or push-in terminals shall be fully enclosed.

GROUNDING:
 Driver case must be grounded.



Xitanium XI040C110V054PST2

40W 0.1–1.1A 54V 0–10V INT (1% dim) with SimpleSet

Features

- 50,000+ hour lifetime¹
- SimpleSet programmable
- Large operating window
- 1% minimum dim level
- Auxilliary power supply (12V/24V selectable, default 12V)

Benefits

- Slim profile housing enables easy design-in with excellent thermal performance
- Enables simple, fast, flexible application-specific configurations
- Enables fixture designs with comprehensive application coverage for various loads and lumen levels

Application

- Indoor linear applications such as troffers and pendants
- Office
- Education
- Healthcare
- Retail
- Big box stores

Electrical Specifications

All the specifications are typical and at 25°C Tcase unless specified otherwise.

Product Data

| Order Information | |
|--|---|
| Full Product Code | XI040C110V054PST2M (Mid-Pack, 18pcs/Box), 12NC:929001780613 |
| Line Frequency | 50/60Hz |
| Min. Mains Voltage Operational | 108 Vac |
| Max. Mains Voltage Operational | 305 Vac |
| Output Information | |
| Maximum Open Circuit Voltage | < 60Vdc |
| Output Current Ripple (ripple = peak to average / average) | 15% max @ max Iout 4% max @ frequency range 60Hz–3KHz |
| Output Current Tolerance (in the performance window) | <5% |
| Protections | Short Circuit and Open Circuit Protection for LED + and LED-, mis-wiring protection for 0–10V interface |
| Features | |
| 0–10V Dimming | 150µA source current from driver. See dim curve for detail. |
| AOC (Adjustable Output Current) | 0.1A–1.1A via SimpleSet programming (refer to graph and notes below) |
| Additional SimpleSet Configurable Features | Adjustable minimum dimming level, Dimming curve selection (linear or logarithmic), Adjustable output level, Adjustable output min, OEM write protection, Dim to off function |
| Environment & Approbation | |
| Operating Ambient Temp. Range | –20°C to +50°C |
| Max Case Temperature (Tcase) | Max. 85°C, Tcase Life: 75°C |
| Agency Approbations | UL8750, UL1310, cUL, Class P (UL, cUL), NOM |
| Electromagnetic Compliance | FCC Title 47 Part 15 Class A |
| Audible Noise | <24dB Class A |
| Weight | 0.573 Lbs/0.260 kgs |

1. Advance Xitanium LED drivers are manufactured to engineering standards correlating to a designed and average life expectancy of 50,000 hours of operation at maximum rated case temperature. Minimum 90% survivals based on MTBF modeling.

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0-10V Dimming Curve

Dimming source current from the driver: 150µA (@ 0<Vdim<8V)

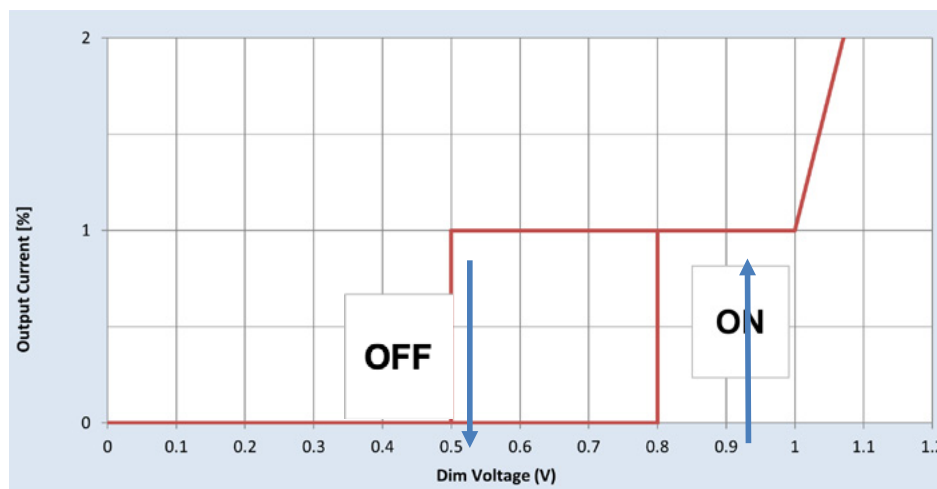
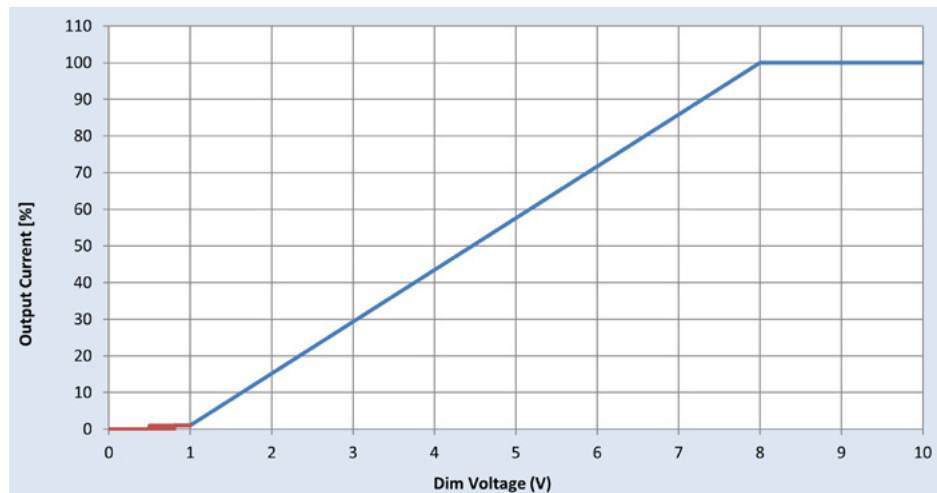
Minimum dim level: 1% of Iout (minimum 2.5mA)

Maximum output voltage on the dimming wires: 12V

The dimming lead leakage current is 0.01mA. The maximum number of drivers that can be connected in parallel to one dimming control circuit is based on this dimming lead leakage current and the calculation is described in the corresponding Design-in Guide.

Dim to Off Function

| Symbol | Parameter | Min. | Typical | Max. | Unit |
|--------|--------------------|------|---------|------|------|
| Von | Turn on threshold | 0.7 | 0.8 | 0.9 | V |
| Voff | Turn off threshold | 0.4 | 0.5 | 0.6 | V |
| Ton | Turn on time | | | 250 | mS |
| Toff | Turn off time | | | 1000 | mS |



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24V 50mA Auxilliary Power Supply

| Symbol | Parameter | Condition | Min. | Typical | Max. | Unit |
|----------|--|---------------------------------------|--------------|----------|--------------|------|
| Vaux | Aux power supply nominal output voltage (programmable) | Steady state and during pulse current | 10.8 21.6 | 12 24 | 13.2 26.4 | V |
| Iaux | Steady state Average output current | 12V 24V | 0 0 | | 100 50 | mA |
| Vaux_p_p | Maximum output voltage ripple p-p | | | | 1 | % |
| Vaux_max | Transient output voltage range | Surge | -25% | | 25 | % |

Approved Dimmer List

| Manufacturer | Manufacturer Part Number |
|--------------|---|
| Lutron | Visit www.lutron.com/advance for a list of dimmers (Mark VII) that will work with this driver |
| Leviton | IllumaTech IP7 series |
| Advance | Sunrise - SR1200ZTUNV |

*Dimmers on list do not support Dim to Off functionality

Approved Sensor List

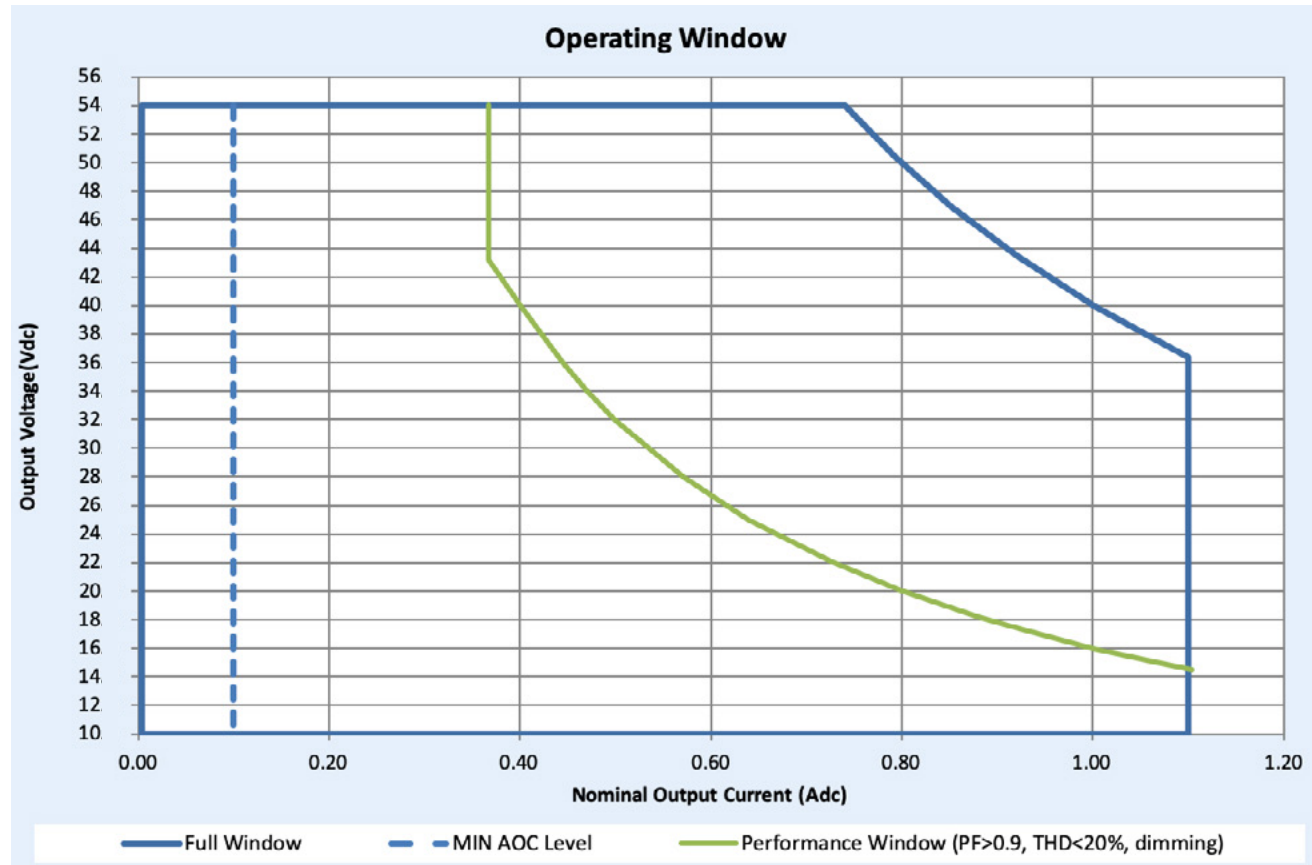
| Manufacturer | Manufacturer Part Number |
|------------------------|--------------------------|
| Wattstopper | ADF-120277 Dimmer |
| | LS - 301 |
| | FSP - 301 |
| | FSP-202 |
| Magnum Energy Solution | Mx-OPUS-CHML10V |
| | Mx-OPUS-LBKO10-LS |
| | Mx-OPUS-10V12 |
| | Mx-OPUS-MLHB10V |
| | Mx-OPUS-ML10V |
| | Mx-OPUS-HBKO10V |
| | Mx-OPUS-DR10V |
| Nedap | Luxon IoT node (9984976) |
| McWong | PSC-BL series |
| Philips Easysense | SNS010 |

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Notes

1. Factory default output current is 1.1A.
2. For dimming to a minimum level of 1% the output current setting through AOC should be $\geq 0.37A$.

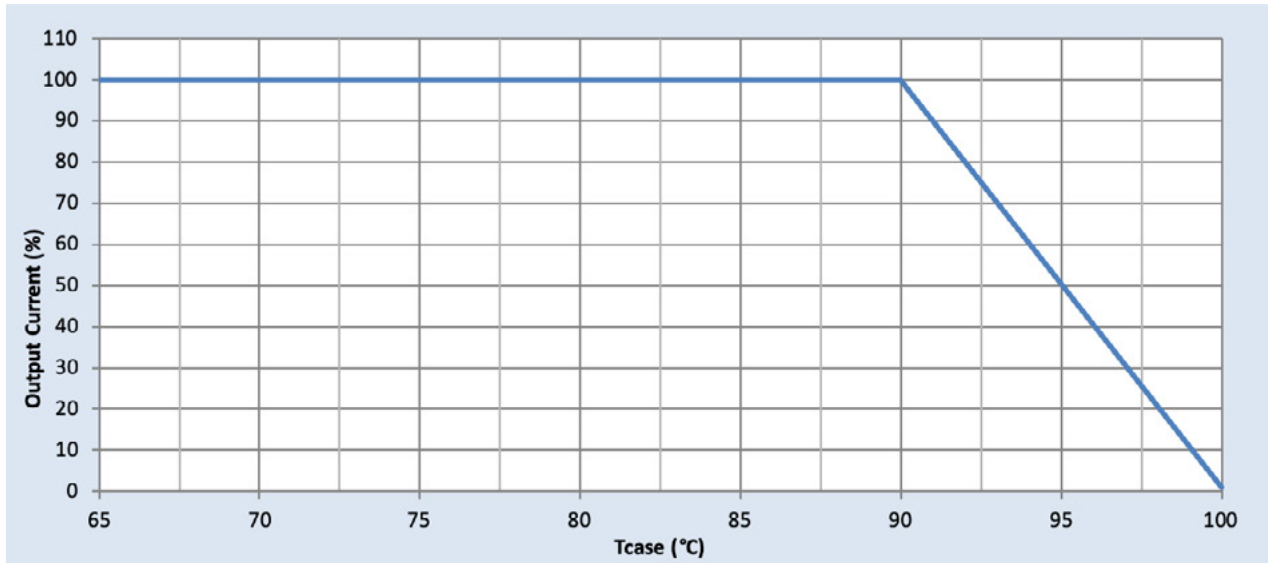
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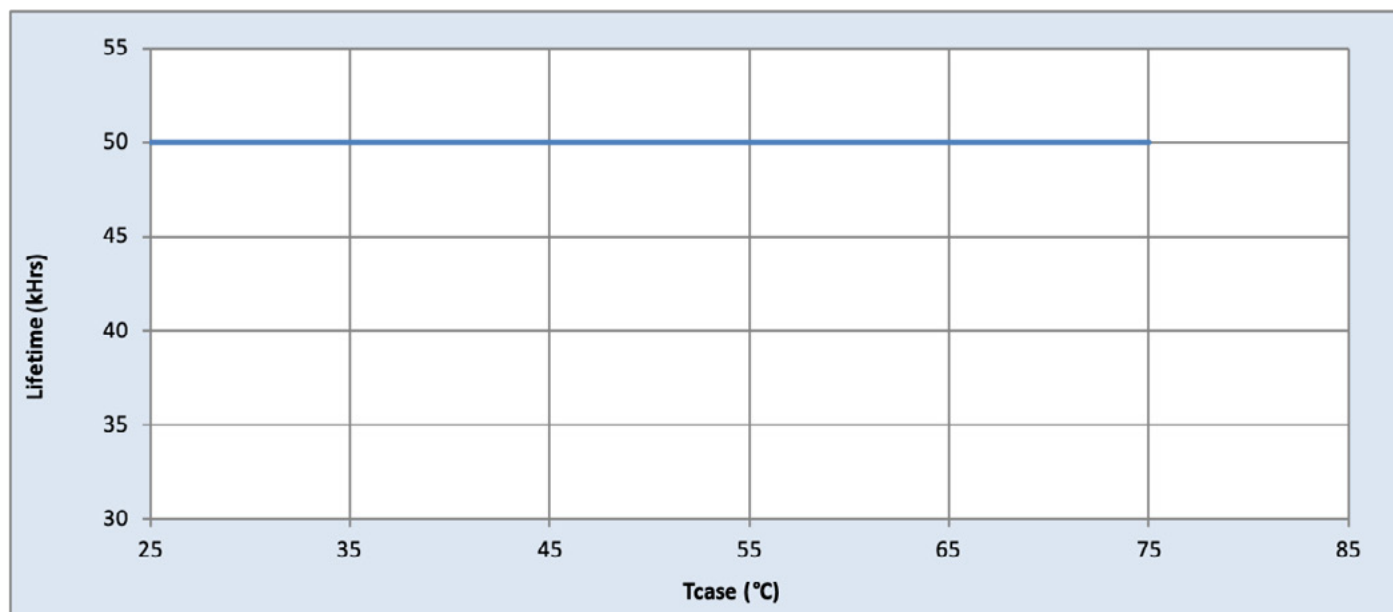
All the specifications are typical and at 25°C Tcase unless specified otherwise.

Output Current Vs. Driver Case Temperature



Note: There is $\pm 5^\circ\text{C}$ tolerance on the driver case temperature.

Driver Lifetime vs. Driver Case Temperature



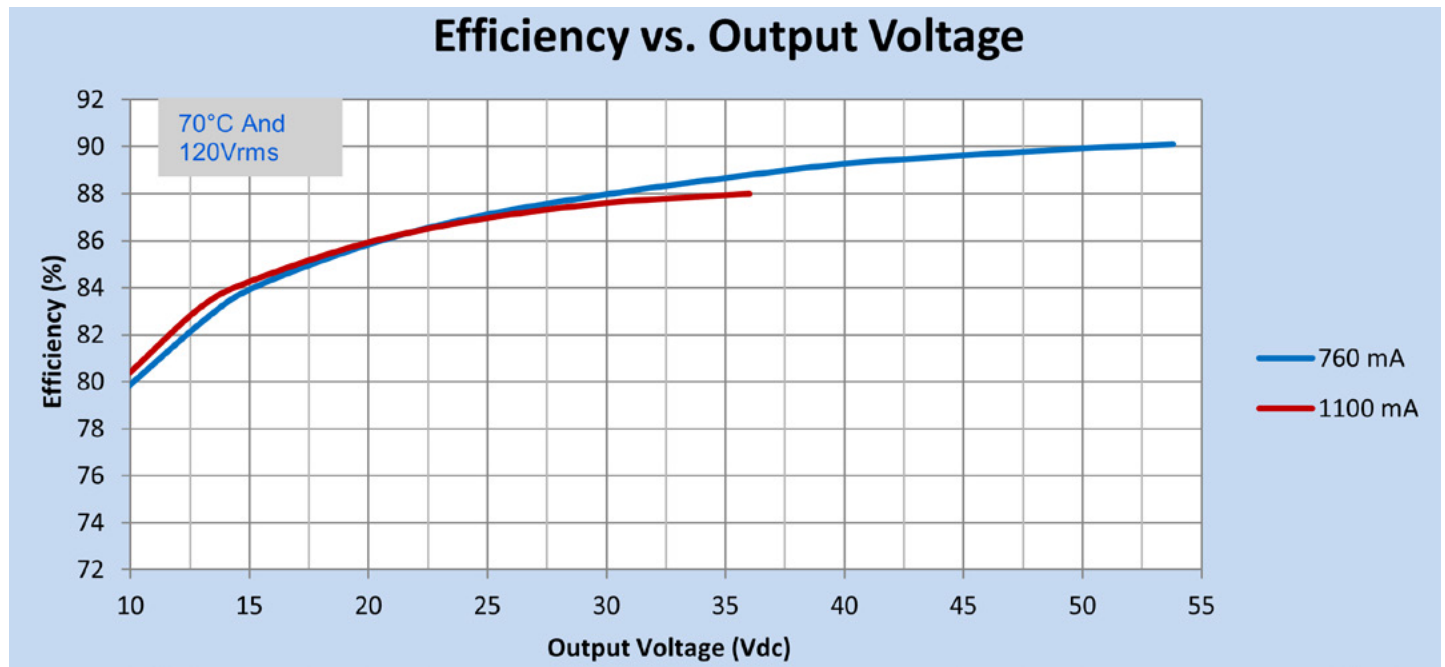
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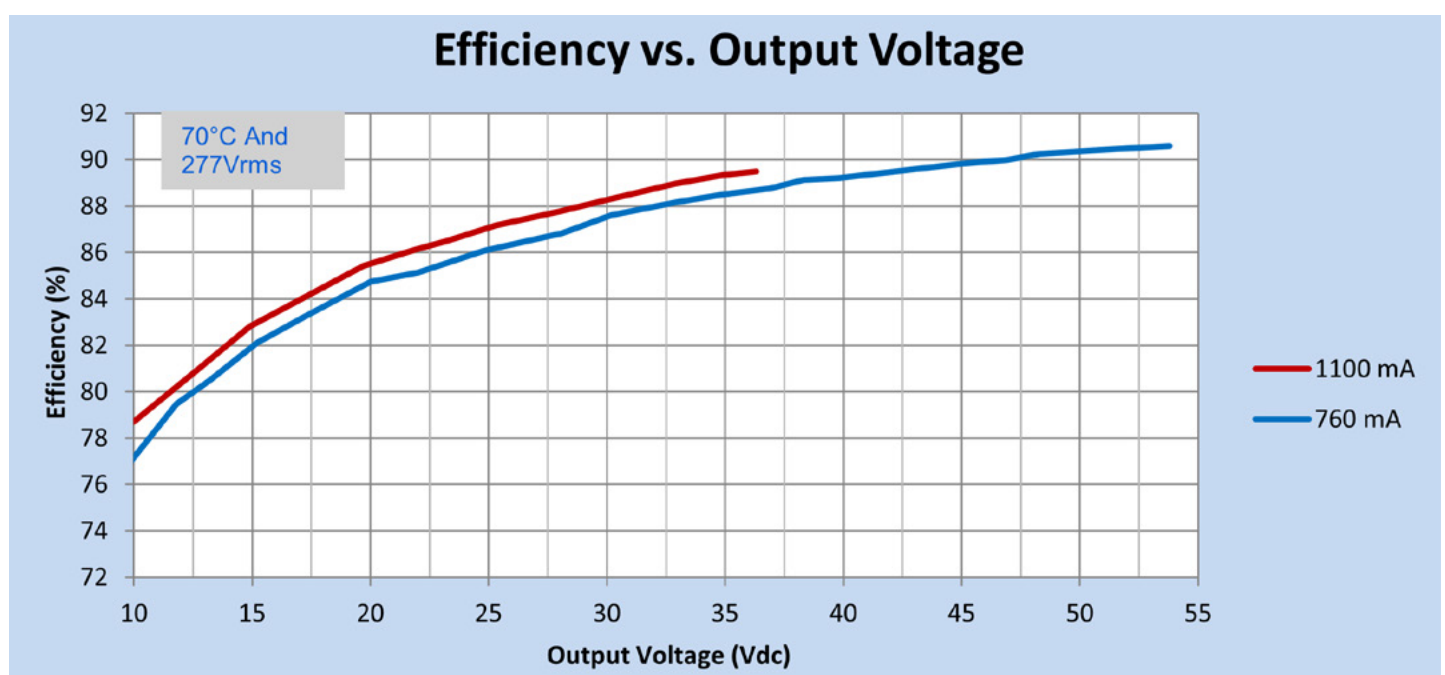
Performance Characteristics

Based on measurements on a typical sample at 75°C case. The accuracy of the measurements is within the tolerance of the measurement instruments.

Efficiency Vs. Output Voltage at 120Vac



Efficiency Vs. Output Voltage at 277Vac



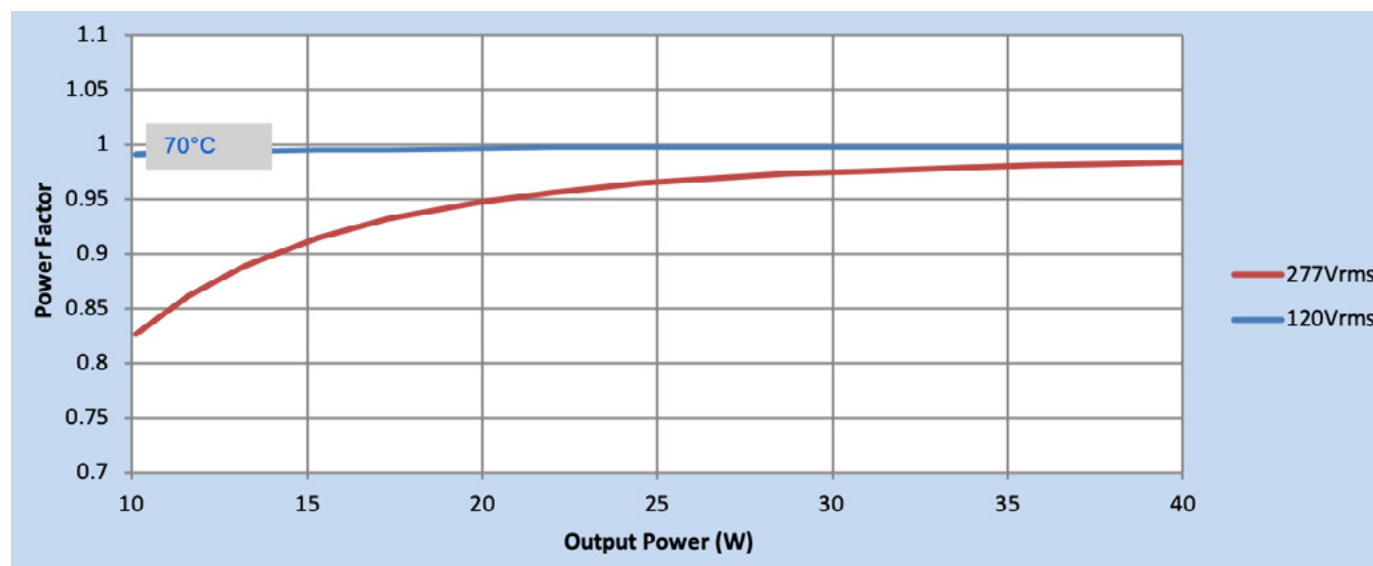
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40W 0.1-1.1A 54V 0-10V INT (1% dim) with SimpleSet

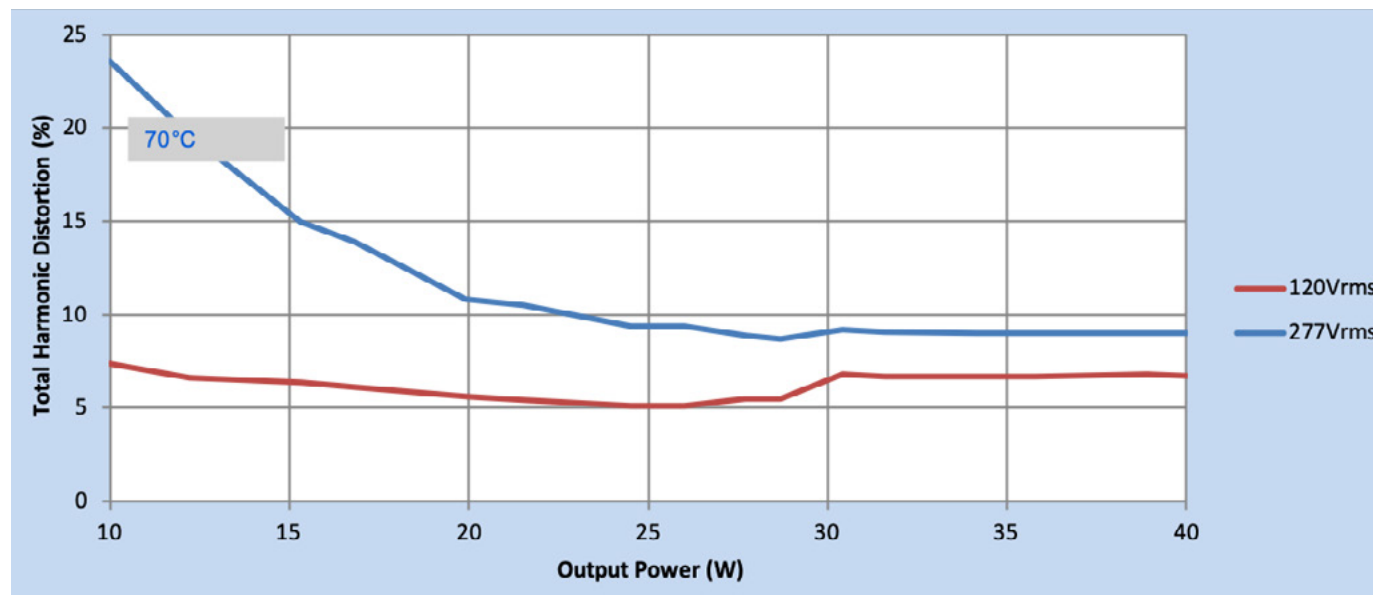
Performance Characteristics

Based on measurements on a typical sample at 70°C case. The accuracy of the measurements is within the tolerance of the measurement instruments.

Power Factor Vs. Output Power



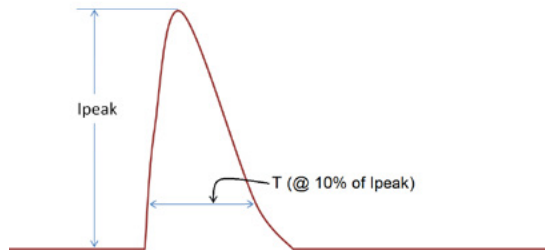
Total Harmonic Distortion (THD) Vs. Output Power



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Inrush Current Info



| Vin | Ipeak | T (@ 10% of Ipeak) |
|----------|--------|--------------------|
| 120 Vrms | 10.36A | 5.99 μ S |
| 277 Vrms | 26.4A | 5.78 μ S |

Inrush current is measured at peak of the corresponding line voltage. Source impedance per NEMA 410.

Lightning Surge Info

| ANSI Surge Type | Differential Mode (L-N) | Common Mode (L-G, N-G, L&N-G) |
|-------------------------------------|-------------------------|-------------------------------|
| 100kHz Ring Wave (w/t 30 Ω) | >2.5KV | >2.5KV |

Isolation

| Isolation | Input | Output | 0-10V | Enclosure |
|-----------|---------|---------|---------|-----------|
| Input | - | 2xU+1kV | 2xU+1kV | 2xU+1kV |
| Output | 2xU+1kV | - | 2xU+1kV | 2xU+1kV |
| 0-10V | 2xU+1kV | 2xU+1kV | - | 2xU+1kV |
| Enclosure | 2xU+1kV | 2xU+1kV | 2xU+1kV | - |

U = Max input voltage



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